

# Ministry of Earth Sciences India Meteorological Department Cyclone Warning Division, New Delhi

# **Tropical Cyclone Forecast Programme Report Dated 08<sup>th</sup> December 2025**

Time of Issue: 1300 UTC

# Synoptic features (based on 0600 UTC analysis):

# No significant system

### **Environmental Features based on 0600 UTC:**

Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)		
Sea Surface Temperature (SST) °C	<ul> <li>28°C over south adjoining central BoB.</li> <li>27°C over north BoB.</li> </ul>	<ul> <li>➢ Around 28-29°C over southeast adjoining eastcentral Arabian Sea, Maldives and Lakshadweep area.</li> <li>➢ Around 26°C - 27°C over rest of Arabian Sea.</li> </ul>		
Tropical Cyclone Heat Potential (TCHP) kJ/cm <sup>2</sup>	<ul> <li>125-150 over eastern parts of southeast BoB, Andaman Sea,</li> <li>About 100-120 over some parts of south, eastcentral and northeast BoB.</li> <li>About 50 over northwest BoB, Comorin area, Gulf of Mannar.</li> </ul>	➤ 120-130 over southeast Arabian Sea, Lakshadweep area and Maldives area.		
Cyclonic Relative - vorticity (X10 <sup>-6</sup> s <sup>-1</sup> )	> 30-40 over southwest BoB	> 20-30 over parts of northeast AS		
Low-Level convergence (X10-6 s-1)	5 over westcentral and adjoining southwest BoB	<ul><li>5 over Kerala- Karnataka coast, southwest AS</li></ul>		
Upper-Level divergence (X10-6 s-1)	<ul><li>20 over westcentral BoB</li><li>10 soutwest BoB</li></ul>	> 5 over south AS		
Vertical Wind Shear (VWS knots) Low: 05-10 knots Moderate: 10-20 knots High: >20 knots	Low- moderate & anti-cyclonic over the south BoB and Andaman Sea.	Low- moderate over south AS		
Wind Shear Tendency (knots)		<ul> <li>Decreasing over south peninsular India adjoining southeast AS, Lakshadweep Islands, Maldives and Comorin area</li> </ul>		
Upper tropospheric Ridge	<ul> <li>Ridge is running along 13°N at 94°E</li> </ul>	-		

Tropical cyclone	No significant GPP over the BoB	No significant GPP		
genesis potential	for the next seven days	over the AS for the next		
parameter(GPP)		seven days		

#### M.J.O. Index:

The guidance from various models indicates that the Madden Julian Oscillation (MJO) index is presently in phase 8 with amplitude more than 1 and is likely to continue in same phase during the next 7 days.

#### **Equatorial waves guidance:**

The guidance from NCICS model indicates weak easterly wind anomaly (3-5 mps) is likely to prevail over south and central parts of Bay of Bengal (BoB) during next 3 days. During the same period weak westerly is indicated over south & central Arabian Sea (AS) with Equatorial Rossby Wave (ERW) over southeast AS & adjoining areas of Comorin and southwest BoB alongwith Kelvin wave (KW). During 9<sup>th</sup>-14<sup>th</sup> December, the easterly wind anomalies are likely to weaken (1-3 mps) gradually over the south and adjoining central BoB. Thereafter, the easterly wind anomaly is likely to strengthen againfrom 15<sup>th</sup> December. During 15<sup>th</sup> -17<sup>th</sup> December, enhanced westerly wind anomaly (7-9 mps) over south BoB & adjoining Equatorial Indian Ocean (EIO) alongwith prevalence of ERW, KW, MJO and LW. These features indicate a favourabl environment for development of a cyclonic disturbance over the south BoB during 15<sup>th</sup>-17<sup>th</sup> December.

#### Satellite based cloud observations

#### Over Bay of Bengal & Andaman Sea:

As per INSAT 3DS at 0600 UTC, scattered low and medium clouds with embedded intense to very intense convection lay over westcentral & south Bay of Bengal. Scattered low and medium clouds with embedded isolated weak to moderate convection lay over north & eastcentral Bay of Bengal and Andaman Sea.

#### Over the Arabian Sea:

As per INSAT 3DS at 0600 UTC, scattered low and medium clouds with embedded moderate to intense convection lay over south Arabian Sea, Maldives and Comorin area.

#### **Outside India:**

As per INSAT 3DS at 0600 UTC, scattered low & medium clouds with embedded moderate to intense convection over, Maldives area, extreme north Pakistan, Tibet, China, Sumatra, Strait of Malacca, Malaysia, Borneo, south China Sea, Java Islands & Sea, Celebes Islands & Sea, Philippines, Sulu Sea, Madagascar, Mozambique channel and over Indian Ocean between latitude 5.0°N to 15.0°S longitude 40.0°E to 120.0°E and between latitude 20.0°S to 35.0°S longitude 40.0°E to 80.0°E.

## NWP Guidance for FDP Cyclone:

MODEL GUIDANCE	Bay of Bengal (BoB)	Arabian Sea (AS)
IMD-GFS	<ul> <li>The trough in easterly wave is running along 14°N at 85°E on 8<sup>th</sup> Dec, reaching along 12°N at 80°E (off Tamil Nadu coast) on 9<sup>th</sup> December.</li> <li>Another easterly wave is likely to be active with development of a trough along 11°N at 85°E on 14<sup>th</sup> Dec.</li> </ul>	circulation over southwest AS, adjoining EIO on 8 <sup>th</sup> Dec, moving nearly west-

IMD-GEFS	Not available	Not available				
IMD-WRF	Not available	Not available				
BFS	<ul> <li>The trough in easterly wave is running along 14°N at 85°E on 8<sup>th</sup> Dec, reaching along 12°N at 80°E (off Tamil Nadu coast) on 9<sup>th</sup> December.</li> <li>Another easterly wave is likely to be active with development of a trough along 11°N at 85°E on 14<sup>th</sup> Dec.</li> </ul>	An upper air cyclonic circulation over southwest AS, adjoining EIO on 8 <sup>th</sup> Dec, moving nearly west-southwestward (WSW) till 10 <sup>th</sup> , less marked thereafter.				
NCMRWF- NCUM(G)	The trough in easterly wave is running along 10°N at 85°E on 8 <sup>th</sup> Dec, reaching along 8°N at 79°E (off Tamil Nadu coast) on 9 <sup>th</sup> December.	An upper air cyclonic circulation over southwest AS, adjoining EIO on 8 <sup>th</sup> Dec, moving nearly west-southwestward (WSW) till 12 <sup>th</sup> , less marked thereafter.				
NCMRWF-	The trough in easterly wave is running along	No significant system during				
NCUM(R)	10°N at 85°E on 8 <sup>th</sup> December, reaching along 8°N at 79°E (off Tamil Nadu coast) on 9 <sup>th</sup> December.	next three days.				
NEPS	The easterly wave is likely to be active with development of a trough along 10°N at 85°E on 8 <sup>th</sup> December, reaching along 9°N at 79°E (close to Tamil Nadu coast) on 9 <sup>th</sup> December.					
ECMWF	<ul> <li>The easterly wave is likely to be active with development of a trough along 13°N at 86°E on 8<sup>th</sup> December, reaching along 11°N at 80°E (off Tamil Nadu coast) on 9<sup>th</sup> December.</li> <li>Another easterly wave is likely to be active with development of a trough along 12°N at 90°E on 14<sup>th</sup> December, reaching along 10°N at 83°E on 16<sup>th</sup> December.</li> </ul>	An upper air cyclonic circulation over southwest AS, adjoining EIO on 8 <sup>th</sup> Dec, moving nearly WSW till 10 <sup>th</sup> , less marked thereafter.				
NCEP-GFS	<ul> <li>The trough in easterly wave is running along 13°N at 86°E on 8<sup>th</sup> Dec, reaching along 11°N at 80°E (off Tamil Nadu coast) on 9<sup>th</sup> December.</li> <li>Another easterly wave is likely to be active with development of a trough along 11°N at 90°E on 14<sup>th</sup> December, reaching along 11°N at 82°E on 16<sup>th</sup> December.</li> </ul>	An upper air cyclonic circulation over southwest AS, adjoining EIO on 8 <sup>th</sup> Dec, moving nearly WSW till 9 <sup>th</sup> , less marked thereafter.				
EC-AIFS	No significant system is indicated during next 7 days.	No significant system is indicated during next 7 days.				

# **Summary of models guidance:**

# Bay of Bengal:

Most of the models indicate the signature of easterly waves over Southwest BoB & adjoining southeast BoB around 8<sup>th</sup> December which is likely to propagate westwards and reach over southwest BoB off North Sri Lanka and adjoining Tamil Nadu coasts by around 9<sup>th</sup>/10<sup>th</sup> December.

Models are also indicating another active easterly wave over southeast BoB on 14<sup>th</sup> December which is indicated to impact south peninsular India and Sri Lanka around 17<sup>th</sup> December.

#### **Arabian Sea:**

Models (except NCUM group) are indicating an upper air cyclonic circulation over southwest Arabian Sea and adjoining equatorial Indian Ocean (EIO) as on today, the 8<sup>th</sup> December. It will have west-southwestward movement till 10<sup>th</sup> December without further intensification.

#### Inference:

Considering various large-scale environmental features, climatology and model guidance, it is inferred that there is no probability of cyclogenesis during next 7 days. However, there is likelihood of following:

- (a) An active easterly wave is very likely to pass through southwest Bay of Bengal around 8<sup>th</sup> December, reaching Tamil Nadu coast around 9<sup>th</sup>/10<sup>th</sup> December.
- (b) Models are also indicating another active easterly wave over southeast BoB region from 14<sup>th</sup> December.

### <u>Probability of cyclogenesis (formation of depression and above intensity systems) over the</u> Bay of Bengal during next 168 hours:

| HOURS<br>NIL |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|              | _            | _            |              |              |              |              |
| 24           | 24-48        | 48-72        | 72-96        | 96-120       | 120-144      | 144-168      |

# <u>Probability of cyclogenesis (formation of depression and above intensity systems) over the Arabian Sea during next 168 hours:</u>

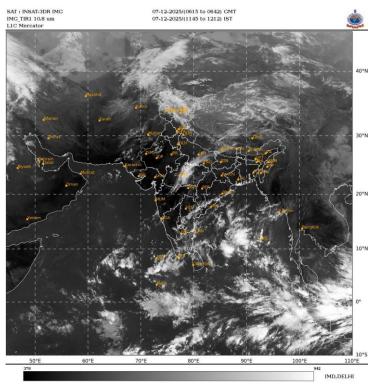
24	24-48	48-72	72-96	96-120	120-144	144-168
HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

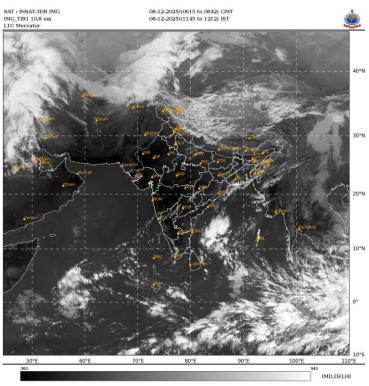
<sup>&</sup>quot;- "indicates genesis has already occurred.

Probability is indicated as NIL for 0%, LOW for 1-33%, MOD for 34-67% and High for 68-100%. Every 24 hrs forecast ends at the 0300 UTC of date.

Intense Observation Period (IOP): Nil

# INSAT 3DS imageries at 0600 UTC of 7<sup>th</sup> & 8<sup>th</sup> December





### **Annexure**

